

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. The listing of claims present each claim with its respective status shown in parenthesis. Only those claims being amended herein show their changes in highlighted form, i.e., insertions appear as underlined text (e.g., insertions) while deletions appear as strikethrough text (e.g., ~~deletions~~) or double-bracketed text (e.g., [[deletions]]). All original claims and previously presented claims appear as clean text.

In the following list, Claims 1 and 12-14 are amended and Claims 17-20 have been added.

1. (Currently Amended) A method of manufacturing fine particles, comprising the steps of:

supplying reactants into a flame produced by a burner;

generating particle nuclei by reactions of the reactants in the flame;

forming aggregates including said particle nuclei by a collision and combination of said particle nuclei with each other in said flame;

irradiating at least one laser beam into said aggregates ~~so that said aggregates are fused, to thereby reduce a size of said aggregates into smaller fine particles; and~~

~~growing said fine particles;~~

using a wave length and a power level of said at least one laser beam sufficient to cause said aggregates to coalesce, to thereby convert said aggregates into smaller fine particles;

wherein said laser beam is irradiated into the flame in a direction perpendicular to a direction in which said ~~aggregates~~ fine particles move.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method according to claim 1, wherein the fine particles are spherical.

10. (Previously Presented) The method according to claim 1, wherein collision cross sections of said aggregates are greater than collision cross sections of the fine particles produced from said aggregates.

11. (Previously Presented) The method according to claim 1, further comprising a step of controlling a phase of the fine particles by controlling a power of the laser beam.

12. (Currently Amended) A method of manufacturing nanoparticles comprising:

supplying reactants into a flame produced by a burner;

generating particle nuclei by reactions of the reactants in the flame;

forming aggregates including pluralities of said particle nuclei by collision and combination of said pluralities of said particle nuclei with each other in said flame; and

irradiating at least one laser beam onto said aggregates in the flame at a position below the top of the flame, said at least one laser beam having a wave length and a power level selected to be sufficient to cause ~~so as to fuse~~ said aggregates in the flame to coalesce into fine spherical particles, and such that the fine spherical particles continue to flow ~~fused aggregates flow past the laser beam and continue to collide with other aggregates and particle nuclei~~ in the flame after leaving the laser beam.

13. (Currently Amended) The method according to Claim 12 additionally comprising collecting the ~~aggregates~~ fine spherical particles onto a member above the flame.

14. (Currently Amended) The method according to Claim 13, wherein the step of irradiating comprises directing the laser such that the laser beam does not intersect a position at which said ~~fused aggregates~~ fine spherical particles collect on the member.

15. (Canceled)

16. (Canceled)

17. (New) The method according to Claim 11, wherein said controlling a power of the laser beam comprises setting the power to a level that does not cause the temperature of the fine particles to reach their melting point.

18. (New) The method according to Claim 11, wherein said controlling a power of the laser beam comprises setting the power to a level sufficient to raise the temperature of the fine particles above their melting point.

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19. (New) The method according to Claim 12, wherein said selection of the power level of the laser beam comprises setting the power to a level that does not cause the temperature of the fine spherical particles to reach their melting point.

20. (New) The method according to Claim 12, wherein said selection of the power level of the laser beam comprises setting the power to a level sufficient to raise the temperature of the fine spherical particles above their melting point.